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MAINTAINING THE FIGHTING FORCE:

COHESION AND SUPPORT SYSTEMS

A. David Mangelsdorff, Ph.D., M.P.H.  
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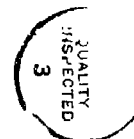
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## PREFACE

There is an extensive literature on how combat produces stress. Commanders need to be reminded of the threat of psychological casualties in combat and how to prepare for dealing with these casualties. There are a number of efforts in the armed services to assess the cohesiveness of units and to develop social and unit support networks for service personnel. This symposium will focus on: (1) who is at risk and (2) what prevention programs are being implemented by the military to prevent stress casualties.

A. David Mangelsdorff, Ph.D., M.P.H.  
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MAINTAINING THE FIGHTING FORCE: COHESION AND SUPPORT SYSTEMS

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## MAINTAINING THE FIGHTING FORCE: COHESION AND SUPPORT SYSTEMS

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There is a large literature on how combat produces stress and the possible levels of psychological casualties in combat. Commanders need to be reminded of the threat of psychological casualties and how to prepare for dealing with these casualties. The incidence of stress casualties is a function of a number of factors. These include: the intensity and duration of the combat, the previous experience of the soldiers in the unit, the tactical situation, the cohesiveness of the unit, the effectiveness of the leaders. Troops do not have to be in the combat zone to experience stress reactions. Support troops may be more at risk to stress reactions than combat troops, in part because of boredom, frustration, or lack of perceived contributions to the combat effort. Troops at highest risk are those who lack support systems. Those at risk include: soldiers with family disruptions, or new children; singles with no supports; single parents with children; soldiers in units with low morale or low cohesion; soldiers in units with poor training or equipment. There are a number of efforts in the armed services to assess the cohesiveness of units and to develop social and unit support networks for service personnel. This symposium will focus on: (1) who is at risk and (2) what prevention programs are being implemented by the military services to prevent stress casualties.

Rick Manning will discuss the data on which soldiers are at risk in terms of incidence rates of psychiatric casualties. The prevention and treatment programs that have been developed to reduce the number of stress casualties will be discussed. An analysis of the characteristics of heroes and casualties will also be presented. 1478

Paul Furukawa will discuss the human dimensions of the New Manning System. The New Manning System is a force structure/personnel management/training effort based upon a regimental model. The Light Infantry Division is being studied for the effects of changes in personnel selection and configuration, changes in equipment and doctrine, and changes in training.

Jan Yoder and Jerome Adams will present one of the prevention programs being developed by the United States Army to examine sources of role strain and unit disruption from sex-role expectations. The development of effective coping strategies and the development of social support networks will help women military personnel become effective unit members.

The Navy has developed a prevention effort to assist its personnel adjust to the potential culture shock when assigned to an overseas billet. Sandy Mumford Fowler describes the Navy Overseas Duty Support Program as one promoting the aims of prevention and assistance. Navy Family Service Centers assist in the development of social support systems by providing knowledge and skills to handle coping with the overseas experience.

Fernando Soriano will examine the Navy Family Services Centers program. A market segmentation study will determine the needs, problems, and concerns of Navy personnel and dependents. From the needs assessment, support service requirements will be assessed and programs developed to meet these needs.



The Coast Guard has attempted to enhance the quality of life for its units. Nicholas Allen and Earl Potter will describe the Coast Guard efforts to develop support systems for service members and their families. Relationships between unit cohesiveness, command strategy, and performance of Coast Guard medium endurance cutters will be examined.

The Air Force has developed selected stress management programs. Ed Gerwell will review the stress management program developed at Loring AFB. The goals of the program were to maximize professional performance and enhance personal relationships and health. In addition, he will discuss the involvement of the Air Force community in the Family Action/Information Board and in Family Support Centers.

The discussant will integrate the various prevention programs being developed by the armed services. The Military Family Resource Center (a tri-service agency) is developing service wide programs to develop social and family support networks. The overall aim of these programs is to maintain the readiness of the service members.

## INTERPERSONAL RELATIONS AND PREVENTION OF BATTLE STRESS CASUALTIES

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A potentially critical component of the U.S. Army Medical Department's attempts to "conserve the fighting strength" is the prevention and treatment of "battle stress" casualties. These soldiers, suffering no apparent organic damage but physically and mentally unable to function, have been a major drain on military manpower in this century. Slide 1 gives an idea of the extent of the losses to the U.S. Armed Forces in the two World Wars. In truth it substantially underestimates the extent of the problem for the combat commander, for the rates shown cover the entire Armed Forces over the entire war. Appel (1966), writing of his own experiences in the North African theatre in World War II, reported that neuropsychiatric casualty rates of 1200-1500 per 1000 strength per year were not uncommon in rifle battalions. In practice this meant that practically all men in rifle battalion not otherwise disabled ultimately became psychiatric casualties.

It would be surprising, given a problem of this magnitude, if we did not know more than a little by now about etiology, treatment and prevention, and in fact we do. The "shell shock" label of World War I had been identified as a misnomer and the principles of effective treatment identified even before the US entered the war in 1917. That is, "shell shock" was recognized as a psychological rather than neurological problem, and effective treatment was done rapidly, close to the front, and with obvious confidence that rest and brief therapy would rapidly return the victim to his unit. Perhaps the most important contribution of military psychiatry in World War II was the gradual shift toward viewing the emotional problems of individual soldiers within the context of his group and social culture instead of focusing exclusively on intrapsychic conflict or pathology. As Weinstein (1947) put it, "The main characteristic of the soldier with a combat induced neurosis is that he has become a frightened, lonely, helpless person whose interpersonal relationships have been disrupted." Steiner and Neuman (1978) provide a particularly elegant corroboration of this view with data from the 1973 Yom Kippur War comparing Israeli stress casualties with paratroop controls. Slide 2 shows the percentages of each group reporting various kinds of combat experiences. It is clear to all, I think, that Steiner & Neuman's "controls" in fact were subjected to somewhat more combat stress than the stress casualties. Slide 3 shows why they were able to remain effective: the paratroopers, unlike the casualties, had the emotional support of a unit and a commander they knew well. As a special commission of civilian psychiatrists headed by Karl Menninger reported just at World War II's end:

The crucial factor concerns the pattern of the soldier's group relationship. The common denominator was that the . . . precipitating factors were less frequently "the last straw" in a quantitative sense than some event which necessitated a sudden change in the basic structure of the pattern of the soldier's group relationship . . . . As a member of the team he would have been able to 'take it.' Alone he was overwhelmed and became disorganized.  
(Bartemeier et al, 1946)

The view this commission goes on to present is by and large that held today and is caricatured in Slide 4, which shows the soldier - note, not just patients - balanced in a precarious equilibrium at some point on a continuum of combat effectiveness. Pushing him toward ineffectiveness are all the stresses of combat and the fears they engender in any sane being. Resisting this push are a constellation of forces centered on membership in a valued group. It is not hard to see why current efforts to increase what we in the military now call "unit cohesiveness," the civilian counterpart of which is "social support," are greeted with wild enthusiasm by those of us charged with treating and preventing combat stress casualties. Several of our other panel members will report on the progress of these efforts.

In the short time remaining to me I would like to bring to your attention two small but growing bodies of data which bear directly on my topic but do not fit comfortably onto my last slide. I hasten to add that they do not contradict the model, but they may ultimately force some expansion or elaboration.

First, I would like to call your attention to some data collected by Shabtai Noy during the 1973 Arab-Israeli war. He did a retrospective study of 40 Israeli soldiers who had suffered battle shock and received treatment during the acute stage of the syndrome. Forty percent of these soldiers had had prior difficulties with peers in the unit or with their chain of command. Noy contrasted this with members of a control group in which only 10% reported such difficulties. More surprising was the fact that 80% of the battle shock cases reported some kind of prior or continuing civil stress. Fifty percent of the battle shock cases had wives who were pregnant or who had given birth within the year preceding the war. In 23% of the cases, there had been a recent death in the family. Other relevant stresses were: being newly married (many more patients than controls were married), taking on a mortgage, or having sick parents. These data are admittedly sketchy, but combined with the fact that Noy's attempts to relate prewar personality to incidence of combat stress were completely unsuccessful, they suggest a cumulative stress model in which resistance to combat stress is at least partially dependent upon a psychological "reserve" which may be depleted by civil as well as wartime stressors. The implications for family support and stress management programs, I think, are obvious.

A second area of research which bears directly on my topic today is that on post-traumatic stress disorder (PTSD). Bob Stretch has recently completed a comprehensive study of PTSD in Vietnam veterans who have maintained a military affiliation - i.e., active duty or Army Reserve. As might be expected, he found much lower PTSD incidence in these groups (5 and 11% respectively) than the 18 to 54% past research has estimated for Vietnam veterans in the civilian community. More importantly, the variable best predicting incidence and severity of PTSD was not combat intensity or duration, or even social support while in Vietnam, but social support in the year following their return from Vietnam. That is, PTSD symptoms were most prevalent among Vietnam vets who experienced negative and often hostile reactions from friends, relatives, and society at large upon return to the States. Vietnam vets who returned to a supportive or nonjudgmental social environment reported fewer symptoms of PTSD. The lower incidence in Stretch's active duty & Army Reserve groups follows quite naturally from this, of

course, as does his finding that symptomatology was far higher among Vietnam Vets who served in the late stages of the war than among those who served early despite the fact that combat was much less intense after 1970. In addition, our colleagues in the Israeli Defense Forces have recently assured us that this is by no means a uniquely American phenomenon. Noy, Levy and Solomon (1983) report that approximately 40% of the combat stress reactions in the Lebanon Campaign were what they call "late reactions," i.e., soldiers who have satisfactorily completed their military duties and developed stress reactions after apparently uneventful periods at home. As you undoubtedly know, Israeli support for continued occupation of Lebanon waned steadily as it became clearer that this was not the typical Israeli surgical strike, but a Vietnam-like quagmire. Such "late reactions" were rarely if ever seen in 1973, when Israeli support of the war was universal, despite the fact that overall stress reaction rates were 50% higher than in Lebanon.

In conclusion, the battle stress reaction may indeed be a malady "known only in combat environment" (Ingraham & Manning, 1980), but it is one which is exquisitely sensitive to the victim's interpersonal relationships - before, during, and after the battle.

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PRE-INDUCTION REJECTIONS AND POST-INDUCTION SEPARATIONS  
FOR "EMOTIONAL & MENTAL" REASONS, U.S. ARMED FORCES.

	<u>NUMBER</u>		<u>RATE PER 1,000</u>	
	<u>WWI</u>	<u>WWII</u>	<u>WWI</u>	<u>WWII</u>
Rejections	68K	1,700K	14	94
Separations	35K	500K	9	50

(Ginzburg et al., 1959)

Comparison of NP Casualties with Paratroop "controls" (1973).

<u>Combat Experience</u>	<u>Casualties</u>	<u>Controls</u>
This war	78%	100
Previous	32	86
Remained in unit thru war	57	88
Experienced exhaustion	32	51
Fought across enemy line	19	95
Were temporarily cut off	12	38
Ran short of equipment, ammo	20	55
Under fire (life threatened)	72	96
Wounded	18	11
Saw dead around them	57	94
Lost close friend or relative	26	70

Comparison of NP Casualties with Paratroop "Controls" (continued)

<u>Psychosocial Experiences</u>	<u>Casualties</u>	<u>Controls</u>
Experienced loneliness	76	29
Changed teams in combat	63	15
Felt <u>no</u> trust in immediate commander	42	5
Low opinion of own military knowledge	46	3
Unit's morale during combat		
High	3	54
OK	25	46
Low	72	0



## RECENT DEVELOPMENTS IN THE STUDY OF HUMAN DIMENSIONS ISSUES

T. Paul Furukawa  
Walter Reed Army Institute of Research  
Washington, D.C.

During the present decade, the Institute of Research has engaged in a series of studies that have shed light on unit cohesion in military organizations. While cohesion has remained the hub of the research concern, specific studies have covered a broad range of topics, including substance abuse, combat stress, the role of the NCO, troop deployment, military families, and organizational structures. Ongoing epidemiological efforts on topics such as health of women in the Army, and active duty suicide rates, also assist in the understanding of cohesion issues.

As an outgrowth of earlier research efforts, the Institute was invited to study the human dimensions of the New Manning System (NMS), a force structure/personnel management/training effort based upon a regimental model. Studies in progress are focusing on NMS organizations and the impact on soldiers, families, and military communities. As part of this effort, the Light Infantry Division (LID) is receiving specific attention.

Preliminary results of the LID study are intended to clarify issues such as the impact of changes in personnel selection and configuration, changes in equipment and doctrine, and changes in training on the human dimensions of caring, commitment, leadership, and unit cohesion.

## PROMOTING UNIT COHESIVENESS AND ROLE COMPATIBILITY IN THE ARMY

Janic J. Yoder  
Webster University  
St. Louis, Missouri

Jerome Adams  
United States Military Academy  
West Point, New York

To contribute to the theme of this symposium which focuses on how unit cohesiveness and role compatibility can reduce stress casualties, we will review our work on gender similarities and differences with West Point cadets and graduates. We seek first to uncover potential sources of unit disruption and role strain and second to offer constructive suggestions to practitioners for avoiding these pitfalls.

As cadets, the most significant sources of role strain and unit disruption came from tokenism and incompatible sex-role expectations or stereotypes. Tokenism involves underrepresented numbers (Kanter, 1977), external pressure to include a previously excluded group, and marginality resulting from minimal adaptation by the organization to accommodate the newly admitted group (Laws, 1975). All these conditions were met at West Point in 1976 when the first women matriculated. We found that women's token status caused female cadets to experience performance pressures, to be isolated from their peers, to be encapsulated into stereotypic roles, and to withdraw at slightly higher rates than their male counterparts (Yoder, Adams, Grove, & Priest, 1985).

The negative effects of sex-role incompatibility and stereotyping are demonstrated in raters' evaluations of cadets' performance in three different roles: the masculine-typed role of squad leader, the somewhat less masculine position of administrator, and the gender-neutral role of squad member (Adams & Yoder, 1985; Rice, Yoder, Adams, Priest, & Prince, 1984). Cadets rotated through these roles during Cadet Field Training in the summer after their first year. Overall, men were rated more favorably than women. Looking within roles, performance appraisals parallel the gender stereotyping of each role. There were no differences between men and women as squad members, some gender differences as administrators (three of 11 scales), and the greatest number of gender differences as leaders (six of 11 scales). As each role became more stereotypically masculine, the gender gap widened.

A similar pattern of sex-role stereotyping can be found in these graduated cadets' field assignments as officer in the regular Army (Yoder & Adams, 1984). Although women and men report equal job satisfaction, career involvement, satisfaction with their social lives and work relations, familial support, and commitment to the military, women are struggling when gender prescriptions conflict with work role demands. For example, women report feeling less effective in the masculine role of leader and less well adjusted as Army officers. As professionals, women are less satisfied with their career development and report less advisement from superiors. Women feel less satisfied with their lives as officers and intend to leave the Army in greater proportions.

Clearly women as a group are experiencing stresses created by their token status and role ambiguities and conflicts that are disruptive to both individual performance and satisfaction and unit effectiveness and cohesion.

Our work suggests three areas where policymakers may concentrate their efforts to reduce tokenism, promote role compatibility, and enhance unit cohesiveness. These involve institutional policies, support programs, and individuals' coping strategies.

Our work at West Point shows that the negative consequences of tokenism were reduced over the four-year period from women's first induction to their graduation in 1980. One reason for this positive change came in the form of changing institutional policies. These policies paved the way for the admission of subsequent classes of well-prepared women, provided unwavering official support for women, and encouraged reassessment of both training goals and evaluative standards (Yoder et al., 1983). The importance of the latter cannot be over-emphasized. Standards that have been developed by and for men exclusively must be re-formulated to encourage the development of male- and female-valued traits and abilities in both women and men (O'Leary, 1975; Yoder, 1983).

In addition to efforts to reduce tokenism on an institutional level, policymakers need to consider the development and utilization of support programs patterned after some of the support networks described in this symposium. Offering support structures designed to address the special needs of women will help validate women's personal experiences and contribute to better functioning units. Specifically, interviews with professional civilian women revealed that sex-role interferences can be minimized in formal organizations where tasks are well-structured and lines of authority are specified clearly, in jobs with well-defined standards of performance and flexible role demands, and in work situations which keep partners task-oriented (Epstein, 1970).

Finally, practitioners may help individuals cope with the stresses created by role conflicts. Tim Hall (1972) describes three categories of coping strategies reported by college-educated women: (a) personal role redefinition which focuses on having the individual moderate her own role expectations, (b) reactive role behavior, the strategy of the superwoman who strives to successfully meet all role demands, and (c) structural role redefinition, which concentrates on ways to alter external, structurally imposed role expectations. The last of these goes hand in hand with the institutional changes suggested above and has been shown by Hall (1972) to correlate most favorably with individuals' satisfaction. Counselors, then, may help military women develop coping skills employing structural role redefinitions.

The role demands and conflicts specific to women entering nontraditional roles may disturb unit adhesion and create individual role strain, both of which are detrimental to the effectiveness of the units and individuals involved. Policymakers need to be aware of these potential problems and to promote role re-structuring and support networks when necessary.

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PREVENTION AND ASSISTANCE:  
THE NAVY'S APPROACH TO CULTURE SHOCK

Symposium, American Psychological Association  
Los Angeles, California, 1985

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The Navy depends on its overseas personnel to help defend the United States, extend diplomacy, and support a fleet that roams the globe. The Navy relies on its people--40,000 active duty plus 30,000 family members living and working overseas, and more than 100,000 men and women sailors who visit foreign ports each year--to maintain good relationships with foreign citizens whose countries host Navy bases and liberty ports. Further, the Navy expects its members (as they expect of themselves) to perform effectively overseas even when faced with severe stress.

Not everyone, however, adapts well to the new conditions and unusual situations experienced overseas. Failure to adapt can be very costly. Such costs are not only monetary: Family discord, ruined careers, chronic illness, and other traumas can place the Navy member at risk in situations that may require extraordinary effort, precise timing, or endurance.

On the bright side, most people sent overseas find their tours personally and professionally rewarding. Among the many benefits they may reap are a world view that is molded by increasingly complex thinking about other cultures, better attitudes about themselves and their work, improved relationships in multi-cultural workgroups, and better adjustment to the stresses of everyday life (Brislin, Dinges, & Fontaine, 1981).

The benefits from living and working in a foreign country are maximized when the person leaves the Navy base and emotionally engages with the other culture. This attempt to relate to the local community can produce the syndrome known as culture shock.

The Navy's response to culture shock is support--in terms of prevention and assistance--for Navy personnel and their families. The support is provided by Navy Family Service Center staff members through information and referral, workshops, and counseling. This support is based on the guiding principles that the duration and severity of culture shock can be reduced to manageable proportions by developing realistic expectations, positively appraising one's own abilities in overseas situations, rehearsing and practicing new behaviors, and enhancing self-esteem through social support.

Stress has long been associated with culture shock, but only lately has the extent and severity of the physiological, neural, and hormonal impact been recognized (Barna, 1984). Culture shock can be defined as a stress reaction. According to Grove (1985), "culture shock is a form of stress resulting from overstimulation and overuse of the body's coping systems due to high novelty in the (social) environment" (p.5).

The body's stress defense mechanism is described by Selye (1956) in terms of his General Adaptation Syndrome. The progression of the response to

culture shock from the alarm reaction, through the resistance stage, to the exhaustion stage, and finally to recovery parallels the response to the stress of combat. Culture shock and combat stress are similar in the delayed response which makes diagnosis of stress sometimes difficult. Although combat stress may carry far more life-threatening potential, there are other common denominators such as the difficulty of anticipating future events, the feeling of inability to cope, the high energy demands, and the debilitating effects of sensory, cognitive, and decisional overload.

Recognizing these challenges to the personnel and families it sends overseas, Navy policy (OPNAVINST 5352.1, 1980) mandates that the support required for successful overseas adjustment, performance, and productivity shall be provided. The Overseas Duty Support Program (ODSP) was established and designed to prepare people to function in cultures other than their own. The ODSP is a branch of the Navy Family Support Program and it provides services through the worldwide network of 70 Family Service Centers.

Prevention and assistance are emphasized in this cross-cultural program. However, prevention does not mean eliminating culture shock altogether. Rather, the attempt is to prevent overstress by providing assistance needed to overcome the stress of cultural shock. ODSP is attempting to make available the tools and information needed to manage the transition from a sea of familiarity into a sea of novelty.

This multi-faceted program has been shaped by the guiding principles mentioned earlier because these factors are known to make a difference in the ability to cope under stress and with novel situations. These coping factors are presenting in Table 1. The type or mode of assistance that addresses the factor is shown as well as the specific program designed to provide the assistance. The factors and programs are described in the remainder of the paper.

TABLE 1

Coping Factors That Make a Difference

<u>Factor</u>	<u>Assistance Mode</u>	<u>Navy Support</u>
Expectations	Information	OTIS/Sponsor
Appraisals	Info/Training	Sponsor/Returnees
Rehearsal/Practice	Trng/Orientation	Pre-departure Workshop Overseas Orientation Field Trips
Self-esteem	Social Support	Family Service Centers Cohort Groups

Expectations. Positive, realistic expectations are the best precursors of successful overseas experience and therefore act to prevent culture shock. According to Hayles (1981), "one of the most powerful concepts/constructs relevant to preparation for intercultural experience is 'expectations'" (p. 1). Expectations have been found to play a major role in mediating other types of stress as well. Sarason and Novaco (1982) analysed the process of adjusting to recruit training and found that the recruit's expectations concerning anticipated environmental demands and beliefs about his or her capabilities to respond were particularly important mediators of stress. Application of these research results in the form of realistic job previews (RJPs) showed that RJPs do not scare off candidates, do not affect the decision to accept/reject an offer, do not adversely affect job performance; while on the other hand they do lower expectations, do lead to more favorable job attitudes, and do reduce turnover. These results argue strongly in favor of the application of RJP techniques in preparation for overseas duty (Hayles, 1981).

Information helps people form realistic expectations. In response to this need for information, ODSP runs a telephone hotline, the Overseas Transfer Information Service (OTIS). The OTIS operators answer questions about overseas assignments (how to get there, what it's like, what to take and not to take, etc.), troubleshoot specific problems, research decision issues, and provide comparison data for many overseas locations. Overseas information is also available at local Family Service Centers. The Navy maintains a sponsor program which often provides the first contact with the overseas base. In addition, overseas commands are required to provide printed welcome aboard material.

Appraisals. Positive preliminary appraisals are particularly important mediators of stress. Appraisals in this context refer to one's interpretation of the environmental situation and judgements about one's ability to respond to its demands. Sarason and Novaco (1982) suggest that negative self-appraisals and low motivation are linked with psychological/behavioral attrition from recruit training. Successful recruits more readily perceive the training experience as challenging and are less likely to worry about failure. Likewise, positive preliminary appraisals of events during an overseas tour or foreign liberty produce positive outcomes (Mumford, 1984). With a negative appraisal, the culture is blamed and the person feels helpless and angry. With a positive appraisal, an intercultural incident (like being lost) becomes an adventure and with each achievement there is increased confidence to take on new challenges.

Both information and training can affect preliminary appraisals. One of the goals of proposed Navy pre-departure training at Family Service Centers is to help people understand the importance of temporarily accepting lower levels of personal adequacy during the most severe stages of culture shock. Self-imposed stress levels are reduced when people can feel all right about themselves at levels of adequacy that would not be acceptable in their home culture. Considering the circumstances, this also helps keep the self appraisal realistic. The Navy attempts to develop positive preliminary appraisals by establishing returnee networks, screening and training the returnees, matching them with people going overseas, and providing opportunities for returnees to meet with prospective overseas sojourners.

Rehearsal/Practice. The preparation for intercultural interaction provided by rehearsing and practicing can make a measurable difference in the stress inherent in these situations. There is an important difference between rehearsals and practice. The rehearsal should take place in the U.S. during workshops conducted at Family Service Centers prior to in-country arrival. Rehearsal is largely cognitive. It can take the form of thinking through what might happen or role-playing a future event. This procedure forces an individual to gather information, plan different courses of action, and consider possible negative outcomes contingent upon events. Practice, on the other hand, usually takes place in the culture under some guidance or in some controlled fashion.

The social psychological theory supporting rehearsals proposes that "when people prepare for unpleasant, aversive events that could occur in the future, the impact of those aversive events is much less severe than if the people did not prepare" (Brislin, 1974, p.3). People are not as startled by a stressful event if they have planned for it. Likewise, people are not as surprised by culture shock when they have undergone an informed process of thinking about it. The most impressive evidence for this comes from medical literature concerning preparation for surgery and from disaster literature concerning the psychological aftermath from natural disasters upon people who were prepared and those unprepared.

The key with rehearsals is not to let people become enmeshed in the negative situation but to identify the specific problems and strategies, solutions or remedies for dealing with the situations. Exercises are designed into Navy cross-cultural training to force people out of old ways of thinking and to develop optional ways of thinking and behaving.

Practice is action oriented and an active learning mode. Classroom briefings, training, or printed information can only provide the foundation for understanding another culture. Real learning takes place through personal interactions in the host culture. Workshops and classes are valuable when they develop learning how to learn (Kramer, 1981). Practice takes the form of field trips, simulation games and other experiential exercises. Practice can make new skills comfortable and reliable. Having practiced various ways of behaving and assimilated the results, the person can choose the option that best fits the situation.

Self-esteem. Self-esteem relates to a sense of adequacy or competence which is a powerful buffer against the ravages of culture shock. Pride in oneself is a trait the individual brings to the overseas experience; however, self-esteem can be enhanced through social support. Albrecht and Adelman (1984), reviewing social support and life stress literature, found support to be conceptualized in a variety of ways, several of which pertain to the Navy's effort. Support can be regarded: 1) "in terms of behaviors that enable the recipient to perceive an increased sense of mastery or personal control over his or her environment," 2) as "information and resources from others in the environment which minimize the perception of threat, maximize actual and perceived mastery and facilitate direct action and anticipatory modes of coping," and 3) as information that leads "the subject to believe that he is cared for and loved . . . esteemed and valued . . . that he belongs to a



network of communication and mutual obligation" (pp. 4-5).

Social Support networks can intervene in the environment to reduce stress. Research shows that the support networks that are most effective may be the ones who share a context with the person in need (Albrecht and Adelman, 1984). An obvious example would be single parent groups. However, there are situations when support systems (like the family) may not be functioning optimally because they too are under a great deal of stress. Under these circumstances, they are hindered from providing effective assistance (Brislin, et al., 1981).

Among the strengths of the overseas Family Service Centers (FSCs) is that their location means they share the same environmental context with their clients. The staff comprises a smoothly functioning social support system in themselves. In addition, by conducting initial orientation and cross-cultural training, the FSC creates a cohort of people concomitantly going through the adjustment process who then become a sub-group support system. The cohort can be supportive by confirming that others are experiencing similar reactions and by providing an opportunity to vent frustrations and clarify and reduce uncertainty.

The FSC training, counseling, and information giving, both CONUS and overseas, aids in the reduction of stress and uncertainty of transition and helps people understand themselves and the overseas adjustment process. One of the reasons FSCs are effective at doing this is that they are neutral territory, not in the individual's chain of command. FSCs are also staffed by professionals who provide a pathway to new information and the acquisition of new skills. They are companions in exploring the new environment and share in the responsibilities for handling it.

Summary. The Overseas Duty Support Program, delivered through Family Service Centers, is the Navy's approach to reducing the culture shock that affects its fighting force overseas. The principles that guide this program have evolved over time and are based on empirical evidence that they make a difference. The ODSP mission is accomplished through information and training which acts to reduce the stress of culture shock upon those who serve and those who accompany them to all parts of the globe.

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It is becoming increasingly clear to both the military and private sector that families play a critical role in affecting the levels of such personnel factors as retention, job satisfaction, and performance, and hence, aid in maintaining the fighting force. For example, in a study on retention, sponsored by Navy Personnel Research and Development Center (NPRDC), spouse opinion was a strong predictor of both reenlistment intention and subsequent behavior of enlisted and officer Navy personnel (Szoc, 1982). The Navy's recognition of the importance of military families led to the establishment of the Family Support Program in the Office of Naval Operations on January 10, 1979. In turn, the establishment of the Family Support Program has led to the creation of Family Service Centers (FSCs). FSCs are human service agencies designed to provide support services to Navy personnel, their dependents, and commands.

Family Service Centers primarily offer three types of services: short-term assessment counseling, information and referral, and proactive educational programs, such as stress management workshops. By the end of this year, it is expected that about 62 FSCs will be operational world-wide. Preliminary studies indicate that FSCs have had a favorable impact on commands (e.g., Bishop, Peters and Wooley, 1982). However, these same studies point to problems with Navy personnel and their dependents being poorly aware of FSCs and their services. Also, it is becoming increasingly clear that single service members need many of the services offered by FSCs. Although never turned away from FSCs, single members may perceive FSCs as exclusively for families. In order for FSCs to have a maximum positive impact on personnel and their dependents, it is imperative that their client populations, including singles, be aware of FSCs, of their programs and services, and of specific needs and concerns of their clients to more accurately assess their service requirements.

To address this problem, NPRDC conducted a Navy-wide survey, known as the Navy Support Services Survey, to determine the major needs and concerns, as well as awareness of FSCs, among Navy personnel and their dependents. In this paper we present selected findings on the awareness of FSCs and on the concerns of Navy personnel and their dependents.

#### METHOD

A total of 25,705 active duty Navy service members were randomly selected, representing approximately a five percent sample of Navy personnel. The sample was stratified by marital status (married and single) and paygrade (E-1 to E-9, and O-1 to O-6). This past March (1985), Navy personnel in the sample were each mailed a questionnaire directly to their command address. Participation was on a voluntary basis, and respondent anonymity was assured and maintained.

The overall return rate was 61 percent with the largest returns coming from those who were married (66 percent for married, and 52 percent for singles) and from higher ranking respondents (70 percent for officers, and 55 percent for enlisted).

## RESULTS

In regards to awareness, the results indicate 78 percent of Navy personnel and their dependents are aware of FSCs. However, of those who are aware, 69 percent have either no understanding or are limited in their understanding of FSC functions. Specifically, of those who are aware of FSCs, 21 percent indicated they did not know about any of the functions of FSCs, 18 percent knew only one of three possible types of FSC functions (counseling, information and referral services and educational classes), 30 percent knew of two main functions, and only 31 percent indicated knowing all three functions of FSCs.

Another important aspect of FSC awareness is the extent to which respondents are aware of the clients FSCs are designed to serve. Family Service Centers are designed to provide services to Navy personnel, (married or single), and their dependents. However, the results indicate 56 percent of Navy personnel misunderstand who FSCs are meant to serve. That is, of those who have a misunderstanding, 63 percent perceive FSCs as primarily intended for Navy families; 16 percent indicated they were not sure; 12 percent indicated only service members, and less than one percent thought FSCs were meant for single service members.

When we consider the proportion of Navy personnel who are fully aware of FSCs, that is, aware of their functions, and at the same time, of the types of clients they are meant to serve, we find that only 13 percent of all Navy personnel have this kind of awareness. When we look at awareness and marital status, we find 16 percent of married Navy personnel, compared to 9 percent of single personnel, are comprehensively aware of FSCs (i.e., of their functions and client populations). Regarding paygrade, we find there are no significant differences in awareness between enlisted and officer personnel. However, the results indicate that within enlisted and officer groups, the higher the ranking the more the awareness. For example, only 54 percent of the E-1 to E-3 group are aware of FSCs, compared to 88 percent of the E7 to E9 group. Likewise with officers, 75 percent of the O-1 to O-2 personnel indicated being aware of the FSCs, compared to 85 percent of O-5 and O-6 personnel. However, time in the Navy (which is highly associated with rank) and not rank, may be responsible for these findings.

In regards to needs and concerns, we report on eight major areas of concern included in our survey. Respondents were presented with a list of statements describing possible problems and concerns, such as "Preparing for PCS." Participants indicated the extent to which each statement item was currently a problem for them or their dependents by using a three point response scale, ranging from "no problem" to "major problem," with minor problem as the middle response.

The following eight areas of concern were derived empirically using factor analysis. They are: (1) adjustment to relocations, (2) deployments,

(3) making career decisions, (4) financial concerns, (5) adjusting to Navy job, (6) adjusting to overseas tours, (7) being alienated, (8) having problems with drug and alcohol dependency. Each area consisted of several items measuring various aspects of each subject area.

As can be seen on Table 1, the results indicate that, of the eight concerns, Navy personnel have the most problem adjusting to relocations. Of the total sample, 55 percent indicated having either minor or major problems with such things as finding adequate housing, family disruptions caused by relocations, preparing for PCS moves, and getting a helpful sponsor. Adjusting to deployments ranked second as a problem. Forty-four percent indicated having either major or minor problems with such things as not spending enough time with their families, preparing emotionally for separations from family and friends, maintaining communication with family, and handling stress before deployments.

Making a career decision was the third ranking problem for Navy personnel. Thirty-nine percent of Navy personnel indicated having problems deciding whether to make the Navy their career. Thirty-six percent indicated having problems meeting basic expenses and knowing how to budget. The results also indicated about one third of respondents (31%) had problems adjusting to their Navy job and to overseas tours. Thirty percent indicated having problems with various aspects of alienation, such as dealing with anxiety, feeling depressed and lonely, knowing what to do with free time, and coping with feelings of jealousy. Finally, eight percent of Navy personnel indicated having problems with either alcohol or drug dependency.

Respondents were also asked to indicate the extent to which they had a current need for various support services and organizations, including their current need for Family Service Centers. Support services and organizations were empirically grouped into six areas of categories using factor analysis. These are: professional support services (i.e., medical, dental and legal services), information and training services (e.g., information and referral, educational courses, etc.), relocation services, short-term support services (e.g., pre- and post-deployment preparation training, etc.), and specialized services (e.g., spouse and child abuse assisting single-parent programs, etc.).

As can be seen on Table 2, the results indicate Navy personnel have the most current need for professional services. That is, an average of 77 percent of respondents indicated having a current need for such professional services as dental, medical, and legal assistance. The need for information and training services ranked second, with 55 percent of Navy personnel indicating a need for services such as information and referral, recreational programs, special services, educational programs, career counseling, spouse and youth employment assistance. Forty-nine percent indicated having either a minor or major need for relocation services.

Thirty-two percent of Navy personnel and their dependents indicated having a need for short-term services, such as Red Cross, FSCs, USO, financial management assistance, Navy Relief, and Armed Services YMCA. Specifically, 39 percent of respondents manifested a need for FSCs. Thirty-one percent

indicated having a current need for deployment services. Specialized services, parent program or assistance, alcohol and drug abuse treatment programs, spouse and child abuse assistance, and rape counseling, were needed by 17 percent of respondents.

## DISCUSSION

In this paper we presented selected findings from the Navy Support Services Survey on the awareness of Family Service Centers (FSCs) and on the concerns of Navy personnel and their dependents. The results indicated that although Navy personnel and their dependents are aware of the existence of FSCs, very few actually know about their major functions and for whom these services are available. This is not surprising for two reasons. First, FSCs are relatively new to the Navy, and most of their advertising has been at the local command level and for very specific services or programs, such as financial management workshops, etc. In regards to the existing misperception of the types of clients FSCs serve, FSCs have, for most of their existence, promoted use by families, since it has been commonly thought that families experience more hardships than singles, thus neglecting singles.

Regarding concerns, the results indicated that at least 30 percent of Navy personnel and their dependents experience problems with seven of the eight areas measured. The top three problems were: adjusting to relocation, deployment, and making Navy a career decision, in this order. These findings indicated a significant amount of Navy families, as well as single service members experience a great number of problems, and in particular in adjusting to the demands of Navy life.

Likewise, the results on the need for support services and organizations indicated more than 30 percent of Navy families and single members recognized the need for all but one group of support services (those that are specialized and designed for smaller, sub-populations, such as single parent programs). That 39 percent of respondents indicated a specific need for FSCs, even though only 13 percent have a complete understanding of FSCs and their functions, attests to their need, but also to the need for increasing the awareness of FSCs through promotional efforts.

In summary, it is clear from the results of this survey, that Navy personnel (married and single) and their dependents have many problems and concerns that need to be addressed. It is also clear that service members and their dependents recognize the need for support services to assist them with their problems. The data on the awareness of FSCs, point to the need for increased awareness of not only the existence of the support services, but also to the need for increased awareness of the specific functions of client populations served by support services and organizations. Only through increased awareness and subsequent use of needed support services can we expect them to assist the military in maintaining the fighting force.

TABLE 1

A R E A S   O F   C O N C E R N  
IN ORDER OF IMPORTANCE

	PERCENT INDICATING PROBLEM
Adjustment to Relocations	55%
Adjusting to Deployments	44%
Making Career Decisions	39%
Financing Concerns	36%
Adjusting to Navy Job	31%
Being Alienated	30%
Drug or Alcohol Dependency	8%

TABLE 2

NEED FOR SUPPORT SERVICES  
IN ORDER OF IMPORTANCE

	PERCENT INDICATING NEED
PROFESSIONAL SERVICES	77%
INFORMATION AND TRAINING SERVICES (e.g., Info. & Referral, Educational Courses, etc.)	55%
RELOCATING SERVICES	49%
SHORT TERM SUPPORT SERVICES (e.g., FSCs, Navy Relief, Red Cross, etc.)	32%
DEPLOYMENT SERVICES (e.g., Pre & Post-deployment Preparation Training, etc.)	31%
SPECIALIZED SERVICES (e.g., Spouse and Child Abuse Assistance, Single Parent programs, etc.)	17%



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U.S. COAST GUARD EFFORTS TO SUPPORT UNIT COHESIVENESS:  
STUDIED NEGLECT IN SYMPATHY WITH EXCELLENCE

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In the mid 1960's the management literature argued that a progressive leader should strive to keep employees satisfied in order that they might perform well. Consultants who favor process consultation still support direct interventions in introgroup affairs in support of organizational effectiveness. In counterpoint to this point of view Hackman and Oldham (1980) and others have argued that satisfaction, motivation, and a sense of group cohesiveness flow from success which is primarily the result of designing work in such a way that success is made possible.

The U.S. Coast Guard is the smallest American military force. It is tasked with diverse missions including search and rescue law enforcement and the inspection and certification of merchant ships and crews. The Coast Guard is sensitive to the esprit and cohesiveness of its units yet supports few direct initiatives to improve cohesiveness and morale. The Coast Guard has devoted a considerable effort in recent years to enhance the quality of life of its members. Included in this effort are specific initiatives to upgrade the work environment, provide family support systems and individual counselling and development programs. Such programs have been helpful in minimizing the drain of energy and commitment that reduces personal well-being and increases organizational costs. Yet, the Coast Guard has otherwise, perhaps unknowingly, favored the position of Hackman and spent the major part of its attention of supporting the performance of its units.

This paper briefly describes Coast Guard efforts to develop support systems for service members and their families and looks closely at the relationship between unit cohesiveness, command strategy and the performance of Coast Guard medium endurance cutters (MECs). Crews of thirteen Coast Guard MECs provided data - interview, questionnaire and performance. The case for building unit cohesion by means of supporting excellent performance is developed.

In the interest of dealing with what interests you the most I am going to begin our paper at the end. We have found: (1) that the "cohesiveness" of the crews on Coast Guard Medium Endurance Cutters varies widely, (2) that the Coast Guard is aware of this great variation and (3) that crew morale and cohesiveness are considered one of the least important issues in assessing the effectiveness of these vessels. It is true that the ships judged to be the most effective include the most cohesive ships. It is still true, however, that some ships judged to be very effective have crews in considerable conflict who would have to be described as anything but cohesive; (4) that the Coast Guard does not act directly to improve crew cohesiveness, (5) that the Coast Guard spends most of its energy in trying to support the material and administrative systems that must function in order for the ship to perform its

missions. For some commands this type of support is adequate, enabling them to achieve great success, for others this type of support resembles the intensive care given a cardiac patient awaiting a transplant - it is palliative, not curative.

No one ever said, at least no one with "real" credibility, that cohesive military units perform the best. In fact, Stogdill in 1972 reviewed a large number of studies finding that cohesiveness without energetic commitment to the mission of the unit was negatively related to productivity. It is for this reason that Johns and his colleague's writing for the Industrial College of the Armed Forces in 1984 defined military cohesion as "the bonding together of members of a unit or organization in such a way as to sustain their will and commitment to each other, their unit, and the mission." In the scale developed by Johns, the number of items describing commitment to the values and objectives of the Service far outnumbers those describing commitment to co-members of the unit.

The primary instrument of this study was a 44-item questionnaire which resulted from a pilot test of 51 trial items on four High Endurance Coast Guard Cutters in May of 1984. The items included items drawn from Johns (1984) scale, Hackman and Oldham's (1980) Job Designation Survey, Stahl, et al's work on institutional vs occupational orientations in the U.S. Air Force and Vaille's (1981) work on High Performing Systems. The common theme that initially bound these items together was the notion the members of cohesive units feel that they are valued members of a valuable team whose work is significant and in which people "hang together" and help each other out.

The questionnaires were sent to the twelve 210-foot long Medium Endurance Cutters (MECs) on the East and Gulf Coasts. These ships with crews of approximately 70 people serve primarily as law enforcement vessels. The majority of their time is spent on drug interdiction patrols, with fisheries patrols and search and rescue being important secondary missions. While the home ports of these vessels ranged from Massachusetts to Texas, their missions are the same. While on drug interdiction patrols, they each serve under the same unified command and operate in roughly the same operational area. The questionnaires were administered in June just prior to the annual round of transfers. Crew members who had been on board for less than four months were excluded from the analysis. Eleven ships responded by "press time" with a total of 609 usable questionnaires. The responding population was not unusual for the Coast Guard although there were very few women - four in 609 to be exact. The respondents were young (50% were 24 or younger with an average of 26), predominantly white (69 minorities, 534 Caucasians, 5 missing data), whose time in the service ranged from four months to 31 years with 50% having less than five years. The average length of time aboard their ships was 15.7 months with 50% having 12 months or less aboard while 15% had longer than two years aboard.

A varimax factor analysis of the questionnaire yielded nine factors with eigenvalues greater than one. It is clear that in this population, at least, cohesiveness is not a unitary phenomenon. While Johns (1984) had attempted to define cohesiveness as both having a commitment to the mission and being bonded to the group, it was clear from this analysis that these factors did

not always go together.

The first factor accounted for 32.5% of the variance and included the following items:

	<u>LOADING</u>
"I am satisfied with the way I am treated by those senior to me."	.50
"On this ship we help each other out from the CO on down."	.62
"The officers here are 'top notch'."	.58
"On this ship we all know what's expected."	.54
"When people do something well here, they get recognized for it."	.67
"The people aboard this unit are more squared away than most."	.50
"On this ship one department helps another."	.52
"On this ship you can count on the officers to help you out."	.69
"I get feedback about my performance."	.55
"The chain of command on this ship is interested in my ideas and suggestions."	.62
"Everyone on this ship seems 'to give a damn' from the CO on down."	.62

This factor seems to define the quality of the leadership or teamwork on the ship. It is meaningful that this factor is the first among the other items of the questionnaire. This should be no surprise to the readers of organizational literature, but it might be of interest to a service which is spending tremendous amounts of money and time trying to improve the quality of life of its service members. After all the ship renovations, family advocacy activities, pay improvements, and personnel policy changes are undertaken, the most important thing in the service member's awareness is still the quality of leadership on his own unit.

A one-way analysis of variance across ships yielded an F of 9.76 (p .001). With a possible range of 11 to 77 and with a score less than 44 indicating a predominantly negative response, three ships described the quality of teamwork and leadership as negative.

The second factor accounting for 4.6% of the variations and include the following items:

	<u>LOADING</u>
"My work aboard this ship is interesting."	.61
"When this ship gets underway, it does a worthwhile job for our country's taxpayers."	.47
"The words 'Coast Guard Family' describe the way I feel about my shipmates."	.45
"Few things feel as good as a 'well done' from the CO."	.59
"The Coast Guard takes care of its own."	.58
"I am a better person because of my association with this ship."	.49

This factor seems to describe the meaningfulness of the Coast Guard's missions and is associated with a pride in the service. A one-way analysis of variance across ships yields an F of 3.17 ( $p < .001$ ). One ship of the eleven has a scale score in the negative range (6-23); the remaining ships, while they vary, express general positive feelings on this factor (25-42).

I think you can get the picture of how these data begin to fall out - so lest you tire of excessive detail, let me briefly summarize the data from the remaining six factors.

TABLE 1

<u>TITLE</u>	<u>% VARIANCE</u>	One-Way ANOVA F (p)	Distribution of X Ship Scale Scores		
			Neg Range	Neutral	Positive
Stress	3.4	2.25 (.01)	11	--	--
Satisfaction with Shipmates	3.2	1.92 (.04)	--	--	11
Working Conditions	2.9	12.22 (.001)	7	--	4
Opinion re Ship's Competence	2.8	18.64 (.001)	1	--	10
Quality of First Class Petty Officers	2.7	4.33 (.001)	3	--	8
Quality of Chief Petty Officers	2.4	4.38 (.001)	2	1	8

In general what you see is first the consequence of demanding deployment schedules in an environment with decreasing dollar and personnel resources. The crews of all the ships despite their dedication and pride find the work stressful and frustrating. They value their shipmates and feel they as a unit, with one exception, are ready to handle any emergency. There are considerable differences among ships.

These numbers are made more understandable by the qualitative data that was gathered with the questionnaire. Crew members were asked to identify a sport that reminded them of their unit and to say why. The sport chosen is not significant, but the images associated with that sport are. These responses were then read by two senior Coast Guard officers with command experience and coded as positive, neutral or negative. Listed below are some examples from the ships identified as the best and worst performers in the group.

#### POSITIVE

TABLE 2

Soccer -	Skill levels and agility are high, you must be well trained as a team.
Football -	You have to group up, call a play; if that didn't work, you huddle again - try again until you achieve success.
Aussie Football -	Free style.
Golf -	Frustrating at times but feels good when done right.
NASCAR -	Out on the track run hard - pull in for a <u>short</u> pit stop and out again.
Track & Field Meet -	Lots of individual performances yet some teamwork items - all working toward the final result.

#### NEGATIVE

Rugby Scrum -	Massive confusion.
Soccer -	Constant exhausting action, little opportunity for planning - all reactive.
Chess -	Because we are used like a pawn and moved around with little regard.
Rollerball -	We tend to self-destruct due to commitments/expectations laid on by program manager.
Big Game Hunting -	It is egocentric, insensitive, brutal.
Snail Races -	Because everything is so slow.
Bullfighting -	Because the crew is the bull and the officers are the bullfighters - everyone knows the bull never wins.

- Hockey - Because of the high intensity level of bad feelings.
- Golf - There is no teamwork, and you are always getting hit with something you don't like.

In order to validate the questionnaire rank orders were determined for each of the scales and for the ration of positive to negative sports images for each of the ships. The rank orders of sports ratio rankings were correlated with the leadership/teamwork scale using the Spearman rho formula. The rank order correlation was .62 ( $p < .05$ ). Thus, qualitative and quantitative data give a consistent picture of the cohesiveness on each ship.

The second major effort of this study was to determine what significance the cohesiveness of these units had for the Coast Guard. In order to do this the leadership of the four Coast Guard districts in which the eleven ships were homeported was interviewed using a Delphi technique. The chiefs of staff, operations, engineering and personnel and the Command Enlisted Advisor were individually interviewed in order to identify the factors which the Coast Guard used to evaluate the performance of MECs. Next, the results of the interviews were integrated and a list of factors presented to each interviewer. The interviewers rated the importance of each factor in assessing ship performance and then rated each ship on the combined factors. Each ship was rated by at least three persons. The ships were then grouped into high and low categories according to their average ratings.

Table 3 lists the major categories of evaluation items and their average importance scores (on a scale of 1-7):

TABLE 3

1. Record of Meeting Operations Commitments	6.2
2. Level of Operational Success/Professionalism	4
3. Operational Data (Quantitative)	4.3
4. Engineering Performance	4.1
5. Material Condition of Vessel	5.3
6. Fiscal Management	4.8
7. Training/Readiness of Crew/Vessel	4.7
8. Professional Development/Reward/Recognition of Crew	3.3
9. Appearance/Demeanor of Crew	5.2
10. Maintenance of Morale/Cohesion/Commitment	3.9
11. Command Responsiveness	5.4

It is noteworthy that the two categories related to crew development and morale are the lowest in importance. The average scale value of these categories in fact falls on the "unimportant" side of the scale.

What is the relationship between our cohesiveness scale and the commands' respective performance evaluations of the ships? In order to answer this question a point biserial correlation was computed for the performance category of the ship (high/low) and the rank order obtained on each scale. Only the leadership scale (1) and the crew's estimation of the ship's competence (7) were significantly related to the ship's performance ( $r_{pb}=.78$ ,  $p<.02$ ;  $r_{pb}=.78$ ,  $p<.01$ ) as judged by their commands. This is not to say that the commands were not aware of the mood of the crews. The fact that the command was aware of morale was made clear in the interviews--some examples follow:

- There is a general feeling that we don't have a cohesive crew in some ships. . . Lack of pride. . . everyone is a misfit, except of course the one who sees everyone as a misfit.
- You get it from personal observation. . . the enthusiasm on the vessel from the FN (Fireman) to the CO (Commanding Officer). . . you feel it . . . positive exciting environment.
- The other ship is a sweat shop . . . they just don't have the spirit for it . . . they feel they're being exploited to make the CO look good.

Despite the fact that members of the senior staff know the ships pretty well, it is still the case that some ships judged to be high performing have unhappy crews. Yet on the other hand the two ships judged by the commands to be the lowest performers held the lowest rank orders on all nine scales, 12 out of a possible 18 times and in no instance finished over fourth from the bottom.

In his 1985 State of the Coast Guard message the Commandant of the Coast Guard outlined four productivity initiatives for Fiscal Year 1986. The first of these related to human resources. He said, "We are proud of our reputation that 'the Coast Guard takes care of its own' . . . but . . . we need to do better in caring for - and about - our people . . . all of them. Coast Guard productivity is directly influenced by how we care for our people." This statement represents what Argyris (1974) has called an "espoused theory of action." It is the principle to which the agency gives public allegiance. It may or may not correspond to the agency's "theory of action in use." The theory in use must be deduced from the observed behaviors of the agency. With the Coast Guard the theory of action in use appears to differ from the "espoused theory."

When a Coast Guard Cutter returns to port a Maintenance Assistance Team (MAT) awaits them on the pier. The MAT is there to help the ship get its



material system in order. The Coast Guard has recognized that under heavy operating schedules the ship's crew alone cannot get the job done. There is no analogous human systems support team. Assistance for individuals is available. Family advocates, drug counselors, chaplains, command enlisted advisors, who are the source of much of the morale information that the district command has, are available. They visit the ships on an annual schedule. There is no team to consult with the CO concerning the "will and commitment" of his crew. Furthermore, if the district is aware of problems on a ship, there is no way to act on those problems. Commanding officers are not relieved or supported when the command likens their ships to "sweat shops." The Coast Guard seems to believe that there are good COs and bad COs. The less effective ones are supported with maintenance assistance teams while other ships may take on some of their operational responsibilities. That commanding officer's career will suffer . . . but he will not be relieved of command.

It would appear as Argyris suggests that the espoused theory of action in the Coast Guard is in conflict with some deeply ingrained habits which probably involve notions about loyalty, command stability, the sacred nature of the command at sea and a sense of a contractual relationship between the parent command and the commanding officer of a ship. It seems to be true based on the Delphi interviews, that Coast Guard commanders regret the discomfort experienced by their crews but are truly unable to act to correct the situation. The Coast Guard is caught in what Argyris calls a single loop learning cycle--unable to act in a way which violates fundamental norms and assumptions while at the same time declaring a will to act. Without a jump to a double-loop learning system in which the basic assumptions of the organization can be challenged, it is unlikely that this situation will change. Without a change the crews of our ships will continue to hear proclamations of concern but will see no action to complement that concern. What is more of a problem, they will continue to be told that their morale is the highest ever while their experience is otherwise.

# THE USE OF A COMPREHENSIVE WORKSITE BASED STRESS MANAGEMENT PROGRAM-A MODEL

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## INTRODUCTION

The backbone of the Air Force's defense capability is its combat crews which man the weapons systems, be they aircraft or ground based, i.e. ICBMs. These systems have elaborate, thorough and effective preventive maintenance scenarios built into their operations which virtually eliminate the possibility of maintenance caused failure. The human component in these systems has also been considered, resulting in well designed and researched rest/work cycles which effectively address the fatigue factor related to combat operations. Additional measures such as initial health status screening for duty selection, routine physical exams and readily available medical and dental care have proven effective in the early detection, remediation and/or elimination of individuals with performance compromising health problems.

Within the emerging body of knowledge contained in specializations such as psychophysiology, psychoimmunology, health psychology and stress management processes, previously not addressed treatment and preventive efforts have been identified (Jemmott & Locke, 1984). Coincidentally, techniques such as biofeedback, relaxation training and meditation have been shown to be effective in treating specific symptoms related to stress. In some cases these techniques along with preventive health practices have proven to also be preventive in nature, or at least significantly reduce the risk of developing various stress related disorders (Millon, Green & Meagher, 1982).

The current status of behavioral technology decries the need for an upgrade in "preventive maintenance" of the human component of our weapon systems which will bring it on par with similar measures which address the hardware component. Given the high cost value of crew members (ranging from training cost of \$500,000 to \$1,500,000 each) and the weapon systems they control, along with the force multiplier aspect of reduced crew downtime, the benefits appear to greatly outweigh the costs. That such a compromise in human performance actually exists and is specific to combat support has been demonstrated (Bishop, 1984). The rationale for a worksite based program over a clinic based program is that it is more effective, since it is situationally specific to the source of stress and the target area of performance enhancement (Allen & Blanchard, 1980; Peters, Benson & Peters, 1977).

## PROGRAM

The program described here was a comprehensive one developed in coordination with the flight medicine section of the base medical facility. This was done to assure compliance with USAF flight safety and health guidelines, and because the flight surgeon's function is already highly

integrated with flight operations and maintains excellent rapport with flight crews. Command clearance through hospital review and base command channels was obtained. The primary elements consisted of:

- (1) Training in and availability of relaxation tapes and portable biofeedback equipment.
- (2) Guidance and encouragement in diet consistent with good nutrition.
- (3) Encouragement and available help in reducing the use of neuroactive substances, i.e. caffeine, nicotine and alcohol.
- (4) Programming for aerobic exercise and assistance in weight control.
- (5) Provision of daily impromptu contact with flight crew members by the flight surgeon and psychologist to discuss ongoing issues which contribute to daily stress.
- (6) Formal training in executive stress management (Quick, Shannon & Quick, 1983).
- (7) Training in couples communication and family support issues provided (Harshfield, Clarkin, Thailer, Blank, Pickering, 1985; Ganellen & Blaney, 1984; Cook, Bishop & Fischer, 1985).

Effort was made to package the program so as to assure its presentation as a preventive and performance enhancement effort as opposed to a mental health, pathology oriented program (Johnston, Gibson, Terry, Haynes, Taylor, Gafni, Sciurella & Sackett, 1984). A primary dependent measure for the intervention was the incidence of mild as well as significant medical complaints presented to the flight surgeon. This measure was chosen because of the close documentation of medical status of crews and continuity of record keeping.

This program was implemented in a flightline based facility. The flight facility is typically a self-contained environment in which crews are required to eat, sleep, train and prepare for possible defense alert situations. They are removed from family and outside contact for extended periods of time. Generally such facilities are located in remote locations of the country, with minimal social and cultural opportunities available in the area. Boredom and monotony are significant elements of these locations, interspersed with periods of high stress and high demand for optimal performance.

#### OUTCOME

Preliminary findings in the implementation of this program were positive. Program received enthusiastic support of the organizational commanders, and high volume of participation of flight crew members. Testimonial impressions of flight surgeons were that there was a decrease in the number of personnel presenting to sick call with minor medical complaints. A coincidental but possibly correlated event was that six months into the program this flying wing won a first time performance competition award.

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THE FISTT PROGRAM FOR PERFORMANCE MANAGEMENT  
FISTT: FLIGHT INTENSIFICATION BY SYSTEMATIC THOUGHT TRAINING

INTRODUCTION: This program was developed at the Loring USAF Hospital by the Flight Surgeons Office and Hospital Psychological Services to assist crew members in maximizing their performance on the job. It is based on a combination of sound principles and techniques which have been shown to improve the health, work capacity and general well being of participants if followed as described and with some consistency.

The essential factors for this personal performance management approach are: physiological control, deep relaxation, exercise, attitude and awareness and diet. Gradually develop and integrate each of these factors for optimum performance.

1. PHYSIOLOGICAL CONTROL: Through the process of controlling thoughts, you can control your physical response in many challenging situations to maximize performance. Research indicates that up to a point, physical arousal increases performance. When that point is exceeded, a decrement in performance occurs. Through the use of biofeedback: electronic devices which indicate that status of certain physiological systems, one is able to learn to control these systems in a positive way. By combining the benefits of biofeedback with imagery or visualization of critical situations it is possible to develop a modulated response to these situations while providing mental practice. Biofeedback also provides a general relaxation response. The two methods of biofeedback in the program are the EMG and thermograph. The EMG provides an indication of muscle tension by measuring the increase in electrical activity as muscles tighten. The goal with this device is to train muscle relaxation and thereby decrease the electrical activity. Increased and prolonged muscle tension is frequently a cause of headaches, strains and other symptoms which decrease concentration. The thermograph measures peripheral blood flow by measuring the increase in skin temperature, thereby increasing blood flow. Decreased blood flow is associated with tension symptoms as well. The goal in this program is to learn to use these techniques first and then combine the newly acquired control with imagery of flight operation to achieve optimized physical status in actual flight operations.

2. DEEP RELAXATION: When peak performance is demanded, the body reacts involuntarily in such a way that the activity of the sympathetic nervous system (the "accelerator" part of the autonomic nervous system) is increased. Breathing, heart and metabolic rate all increase and blood pressure rises as the body prepares to respond.

Frequently we are aware of and anticipate the times when peak performance will be demanded of us in advance. This anticipation can last for days or even months, for example awaiting ORI's SAC competitions, etc. Such anticipation can result in the same physiological response, which when prolonged without release results in a decrement in performance, and if prolonged for long periods, ultimately illness.

These physiological responses may be brought under voluntary control through a series of physical and mental training exercises. These exercises involve listening to and following taped instructions for approximately twenty

minutes per day.

3. EXERCISE: The third essential component of any effective performance management program is regular exercise. To be effective, the exercise should be aerobic in nature (one in which you have to breathe heavily, but which doesn't consume oxygen faster than your heart and lungs can supply it); it should be done regularly and it should involve ten to thirty minutes per session.

Any program of regular exercise must include:

Intensity. Because we live such competitive lives, our first urge when exercising is to push ourselves to what may be dangerous levels. Slow down and take one step at a time. Intensity has to be set at about 40 percent of your personal capacity to result in a fitness improvement. This capacity can be accurately measured on a stress test. In general, intensity should be set as low as possible in the early stages of a training program and after six months to a year, gradually increased to about 80 percent of capacity. Before beginning any exercise program, contact the FSO.

Frequency. Frequency is of less importance than intensity. It takes a minimum of two sessions a week to maintain fitness and three or more to see improvements.

Duration. A program of twenty minutes per session (three times weekly) will result in weight loss. In the beginning stages, ten minutes is sufficient. This should gradually be increased to twenty or thirty minutes per session. Once again, the advice is to take it easy and build fitness slowly and regularly.

Type. The type of exercise is not too important as long as it is low resistance and repetitive in nature. This includes walking, running, jogging, skipping rope, swimming and cross country skiing. Low intensity activities like golf and bowling are not recommended.

Any activity will do quite well as long as it is low intensity and carried out for twenty minutes or more.

The main effects of a regular exercise program seems to be to reduce the chance of illness and improve alertness and stamina.

4. ATTITUDE AND AWARENESS: In order to change many of our behaviors, we must first change our attitudes. Changing attitudes requires some general awareness that what we are currently doing needs improvement.

Probably the most important attitude we can develop is one of setting priorities. Start to manage time more effectively. These sorts of changes have implications that go beyond work performance and into all aspects of living, tending to create a far more balanced lifestyle.

Some positive self statements such as: "avoid task overload where possible" and "Focus on the important things first," "Be realistic" and "Think

positively" allow us to become more creative, more productive, more skilled at dealing with demands, more appreciative of our environment and increase personal satisfaction. Don't attempt to begin more than one major project in one area of your life at a time. When work requirements are up, other areas of your life, such as social and recreational, should not add additional demands. Mental calmness is an important factor in coping with demands and being able to think clearly when under pressure.

5. DIET: The final factor in this program is diet. There is no doubt that a person's diet has a profound effect on his or her mental and physical well being. The following dietary guidelines are recommended:

Follow the U.S.'s dietary guidelines (that is, eating moderately from all the major food groups, and reducing meat and fat consumption). This is the best advice you can get on diet.

Keep away from "junk foods" or those containing artificial additives.

Avoid liquor and caffeine in excessive doses. A few drinks once in a while will do no harm, but don't let it become a primary coping behavior. Caffeine in excess produces symptoms indistinguishable from anxiety neurosis because of its harmful effects on the central nervous system. You should drink no more than three cups of coffee, cola, tea or other caffeinated beverages per day, and stop six hours prior to bed time.

Avoid faddish diets and quick weight loss diets. Long term weight loss is maintained by regular exercise and good eating habits.

Smoking is dangerous. Avoid it altogether if you possibly can. Particularly for flight crews, proper oxygen exchange in the lungs is important. Smoking compromises this capability.

a. Increase the consumption of fruits, vegetables and whole grains. If overweight decrease intake and begin exercising.

b. Decrease consumption of refined and processed sugars.

c. Decrease consumption of foods high in fats and replace the consumption of saturated fats with fats from vegetable sources. Eat more poultry and fish.

d. Reduce cholesterol consumption to 300 mg. per day.

e. Reduce salt intake to about 5 grams per day.

6. FINAL NOTE: Begin now! You will immediately realize the benefits. There is not doubt that practicing such a balanced program leads to a more productive professional and personal life. This is the best possible path to peak performance.

The title of this program was chosen purposely. We believe that conscientious application of this program will place in each individual's

hands the power of maximum performance. With each individual combining his or her maximum performance through team work, the result is a 42nd Bomb Wing which is strong, ready, competitive and unbeatable. This is symbolized by the fist on the SAC emblem.

For further information and assistance contact the FSO and/or FIST representative. Biofeedback equipment and relaxation tapes may be obtained from either FSO or the desk for loan.



## SYMPOSIUM DISCUSSION

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This symposium has focused on risk factors which can lead to operational stress, and on prevention programs designed to reduce levels of stress. Dr. Mangelsdorff noted several risk factors predictive of operational stress, including high intensity and long duration operational exposure, past experiences, low unit cohesion and morale, ineffective leadership, and lack of support systems. The preventive programs have received considerable attention within the services of late (Swiney, 1982). Today's speakers have addressed the current status of many of these programs.

In some of our earlier work (King, Mangelsdorff, and O'Brien, 1985; Mangelsdorff, King, and O'Brien, 1985b), we have noted that the control of operational stress requires pre-deployment actions which prepare a unit for operations, deployment actions which support an operational unit in the field, and post-deployment actions which prepare a unit for subsequent operations.

Pre-deployment actions include promoting bonding among soldiers and families, providing family support, individual counselling, developing commitment to unit and service goals, preventive efforts, providing appropriate training, conducting evaluations of unit cohesion and support systems, and establishing mental health liaison with the supported unit. These actions represent a continuous and ongoing baseline of support directed at specific populations and units. Family support programs, properly directed, are able to significantly reduce stress. The U.S. Navy effort is highly instructive in this regard.

The deployment phase actions include prevention, brief interventions with stress casualties, command consultations, and unit mental health evaluations. Maintenance of intra-unit support systems is crucial during this phase of an operation.

The post-deployment actions include group debriefings, unit consultations, unit status assessments, follow-up encounters with identified individuals and groups, and preparation for subsequent operations through a vigorous program of command consultations. Dr. Manning's discussion of the experiences of individuals returning from American units in Vietnam and from Israeli Defense Force units in Lebanon suggests that improper handling during this phase contributes significantly to long-term stress reactions.

The evaluation of cohesion and morale must be focused on specific units, while assessing the individuals within those units. Survey instruments suitable for use in operational settings are available for use in such evaluations (Mangelsdorff, King, and O'Brien, 1985a). High morale and cohesion are strongly associated with resistance to operational stress, as has been observed here today.

Programs which are designed to prevent operational stress must focus on the specific operation, the specific unit, and on the individual members of a unit, for stress can only be fully understood if the interactions of the characteristics of the particular situation and environment and of the individuals, to include the level of subjective strain, are appreciated (Dohrenwend and Shrout, 1985; Lararus, DeLongis, Folkman, and Gruen, 1985; Eysenck, 1983).

For personnel in an operational environment, their immediate group is their crucial support network. Army efforts to build military cohesion in operational units have included the COHORT initiative, and family support programs. These undertakings, described by Dr. Furukawa, have emphasized long-term stability within units and promoting bonding among soldiers and among families. The effectiveness of units constituted along these lines has been found to be unusually high.

Military women are also a group which requires specific examination. Drs. Yoder and Adams have noted that they experience a unique constellation of stressors, which can be controlled by reducing tokenism, promoting role compatibility through changes in environmental demands, enhancing unit cohesiveness, providing directed counselling, developing appropriate coping strategies, and providing mentors. These efforts should be undertaken prior to operational deployments.

All of the services have become aware of the importance of the family. Support programs have been found to enhance unit effectiveness, although they can be directed towards the individual family as well as the unit. Difficulties in determining the needs of the served population and in reaching that population with information, counselling, and educational programs have been described by Dr. Soriano. As long as these programs are supported, awareness of and use of the family support system can be expected to grow, as many portions of the service population are significantly underserved. Dr. Fowler has found that many of the problems associated with overseas permanent change of station moves and with overseas deployments can generally be handled successfully through suitably configured support programs. Family stressors within the continental United States could also be reduced substantially if such programs were in more general use.

The Coast Guard approach to the development of cohesion and support systems outlined by Drs. Allen and Potter is instructive regarding beliefs about cohesion in relation to overt behavior based on those beliefs. Although reported leadership/teamwork and perceived competence of the vessel are strongly related to command evaluations of ship performance, cohesion development is a low priority activity. Instead, organizational support is directed towards meeting materiel and administrative, and not human, needs. The Coast Guard supports cohesion development with its pronouncements, but not with its actions. To borrow a concept from Tolman (1938), there is a major distinction between knowledge (e.g., about the development of cohesion and support systems), and suitable performance based on that knowledge.

The Loring Air Force Base program developed by Dr. Gerwell may be taken as a model for stress control efforts. It was unit based, was presented as a performance enhancement program, and was conducted within the supported organization. This program, emphasizing relaxation, stress management, lifestyle alterations, family support, and spontaneous contact with the supported personnel in their operational environment, lacked only cohesion development and evaluation for completeness. The effectiveness of this effort, as measured by participation, attitudes, minor illness rates, and performance, was quite good.

The papers presented during this symposium suggest the directions in which ongoing, pre-deployment efforts to control stress through the development of cohesion and support systems should move. We recognize the importance of the human component in our respective services. We must now insure that each service is persuaded to objectively assess the needs of their populations, to develop and field suitable cohesion and support systems for these targeted populations, to support individuals, families, and units, and to critically evaluate the resulting programs. Thank you all for your participation.

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